

## POOR LEGIBILITY

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DUE TO THE QUALITY OF THE ORIGINAL

Purpose: Preliminary Assessment

Site: Litton Engineering  
170 River Road  
Dayton, Nevada  
Lyon County

Site EPA ID Number: NVD986768463

Report Prepared By: Karen K. Beckley

Through: Jolaine Johnson

Report Date: July 16, 1991

Submitted To: Carolyn Douglas  
EPA Region IX

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## PRELIMINARY ASSESSMENT

DATE: July 16, 1991

PREPARED BY: Karen K. Beckley  
Nevada Division of Environmental Protection

SITE: Litton Engineering  
170 River Road  
Dayton, Nevada  
Lyon County

EPA ID #: NVD986768463

### 1. Introduction:

Under Cooperative Agreement with the USEPA Region IX, the Nevada Division of Environmental Protection has been authorized to perform Preliminary Assessments of suspected hazardous waste sites listed on CERCLIS for Nevada. Preliminary Assessments are performed in conformance with provisions of the National Oil and Hazardous Substances Contingency Plan, the Superfund Amendments and Reauthorization Act of 1986, and the Comprehensive Environmental Response, Compensation and Liability Act of 1980.

### 2. Site Description:

The Former Litton Engineering Site is located approximately 3 miles northeast of Dayton, Nevada in Lyon County. The site is a 10 acre parcel, (attachment 1).

A sign on the building says "Power Systems, Inc.". The building is currently vacant although the owners, Michael and Barbara Hughes, are trying to lease or sell the property. Pea gravel has been spread on the ground surrounding the site and no access to the inside of the building was available at the time of site reconnaissance.

The site contains one large (approximately 30' x 100') building with a cleared strip about 20'-50' surrounding the building. There is a creek bed 50 feet behind the building, (attachment 2).

A history of the site was provided by Litton Engineering Laboratories of Grass Valley, California as follows:

1968-1969	Property purchase by M/M Charles V. Litton from William Eitel. A building was constructed with a residence in the west end of the building.
1969-11/72	Litton Engineering Laboratories moved all of its inventory to the building from Grass Valley, CA.

Litton's inventory consisted of machined mechanical parts for their products of Lathes and Chucks for the Glassworking Industry. A small R & Machine shop was moved to the building as well as equipment originally used in the manufacture of vacuum tubes which was being warehoused for possible future use.

- 11/72 Mr. Charles V. Litton, passed away. The Board of Directors decided to discontinue its original intention to move the company totally to Nevada and began a period of returning its personal property to Grass Valley, CA.
- 12/72-8/77 Litton moved its inventory and assembly function back to Grass Valley, CA. Inventory and other warehoused equipment was brought back on an as needed basis. Also during this time, Tom Ward rented the apartment in the building for his residence.
- 9/77-2/80 The building was leased to several companies but basically under one lease and one person. The companies were called Amon-Ra, Inc., Dayton Company, and Quietlite International. The principal was William Elliot.
- 2/80-6/84 Building was not used except for the warehousing of a few pieces of Litton equipment.
- 6/84-12/84 Building was rented by its current owners, Michael and Barbara Hughes and used as a residence while their house was being built across the street.
- 12/84-9/86 Building was not used except for the warehousing of a few remaining pieces of Litton equipment.
- 9/86-5/90 Building was sold to Joel Darren on 9/1/86. He moved his company, High Country Tool & Die, from Carson City to the building and operated a limited plastic molding operation.
- 5/90-7/90 Litton had to foreclose on the property. During this period Litton removed the last of its property in preparation for its sale. Among these items of property were 15 transformers which have been tested for contamination of PCB. The results of these test show these transformers to be NON-PCB (attachment 1).
- 7/90 Property was sold to Michael and Barbara Hughes.

### 3. Apparent Problem:

The Nevada Division of Environmental Protection received an anonymous call indicating that electroplating wastes and electrical transformer polychlorinated biphenyl fluids generated by Litton Engineering were discharged at the former Litton Engineering site. A map was sent in by the caller showing the spots of potential contamination, (attachment 3).

There is ground staining in these areas, and one sample has been taken by Alene Coulson, Enforcement Branch, Nevada Division of Environmental Protection. The sample was obtained from the top 4 inches of soil at area 3 on the map. The ground was extremely hard making deeper sampling impossible with the equipment on hand.

The sample was analyzed for total recoverable chromium/copper. The results indicated 14.3 ppm for total copper and 14.7 ppm for total chromium, (attachment 4).

### 4. Regulatory Involvement:

On September, 1990, the Compliance Monitoring & Enforcement Branch (CM/E) of the Nevada Division of Environmental Protection issued an FOAV/Order to the current owners, Barbara & Michael Hughes, which required a site assessment by 1/1/91. However, after conferring with the Hughes, it was apparent that they were not the RCRA Hazardous Waste generators and have never been.

### 5. HRS Factors:

The Hazard Ranking System (HRS) is a scoring system used to assess relative threat associated with actual or potential releases of hazardous substances from sites. It is the principal mechanism EPA uses to place sites on the National Priorities List (NPL). EPA has revised the HRS, pursuant to the Superfund Amendments and Reauthorization Act of 1986 (SARA). NDEP has evaluated the following HRS factors relative to this site.

#### 5.1 Waste Type and Quantity:

Based on the limited amount of information, the exact waste quantity is unknown. Therefore the area of contamination was assumed to be 1 acre. Laboratory analyses of one area indicated concentrations of copper and chromium at 14.3 ppm and 14.7 ppm respectively. Detection limits were 5 ppb, (attachment 4).

#### 5.2 Ground Water:

Since it is unknown if the Carson River completely transects the upper aquifer, all of the wells within the four mile radius of the site were considered.

A review of well drillers logs in the area indicates that the water table varies from an elevation of about 72 feet to 790 feet below

the surface. The average well depth is about 225 feet below the surface. There is one on-site well used for domestic purposes, (attachment 5).

In the area surrounding the site, drinking water is supplied by either shallow private domestic wells or municipal wells all drawn on the same aquifer. There are 4321 residents in Dayton:

>0-1/4 mile	population 283
>1/4 to 1/2 mile	population 5
>1/2 to 1 mile	population 11
>1 to 2 miles	population 1263
>2 to 3 miles	population 1556
>3 to 4 miles	population 1203

Given the probability that hazardous wastes have been dumped on the property, there is a potential to release to the drinking water aquifer.

### 5.3 Surface Water:

The site is located in an area of Orizaba sandy loam. The top 0-3 inches of soil consists of sandy loam and the next layer, 3-60 inches, consists of stratified silty clay loam to sand.

The soils in area are covered with characteristic vegetation as follows: black greasewood 25%, basin big sagebrush 20%, basin wildrye 10%, creeping wildrye 10%, spiny hopsage 5%, and shadscale 5%. The trees in the area are big saltbush, fourwing saltbush, redosier dogwood, autumn-olive, Russian-olive, white mulberry, black locust, golden willow, lombardy poplar, and Fremont cottonwood.

There are three surface water features within half a mile of the site, the closest being a semi-perennial "ditch". This ditch is located on-site approximately 50 feet west of the areas of potential contamination. This ditch, when flowing, drains into the Cardelli ditch. The Cardelli ditch is used for irrigation and stock and has an average flow of 13.35 cfs over the last five years for the months of April through September. The Cardelli ditch is approximately 100 feet west of the site and flows into the Carson River. The Carson River is located approximately 1/2 mile southeast of the site. The average yearly flow of the Carson River for the last 78 years has been 374 cfs.

The site is located in the 50 year floodplain and the average 2 year, 24-hour rainfall is estimated at .6 inches.

Given the probability that hazardous wastes have been dumped on the property, there is a potential to release to the surface water.

### 5.4 Air:

The air pathway is not a pathway of concern since there has not been an observed release to air and pea gravel has been spread

around the building covering the potentially contaminated soil.

#### 5.5 Soil Exposure:

The building on site consists of one large industrial building, with the west side converted to a residence (apartment). At the time of inspection, the building was unoccupied. There is also a trailer on the property approximately 500 feet south of the potentially contaminated area.

An area of approximately 50-100 feet surrounding the building has been cleared and is covered in pea gravel.

The site is not fenced but has "No Trespassing" signs posted. Access to the property is off of highway 50 approximately 1/4 mile on a dirt road. A pasture is directly across the road from the site with the associated residence 500 feet south of the pasture. No public recreation activities are associated with or around the site within 1 mile.

There are three other residences surrounding the property.

The potential of soil exposure to the population is very unlikely.

#### 6. Emergency Response Considerations:

The site does not represent an imminent public health threat since the potential for exposure is low.



7. Conclusions:

A release of contaminants from the site to shallow ground water and surface water is possible given the hydrogeologic setting and the nature of waste materials. Air and soil exposure pathways are not expected to be impacted by the site.

8. EPA Recommendation:

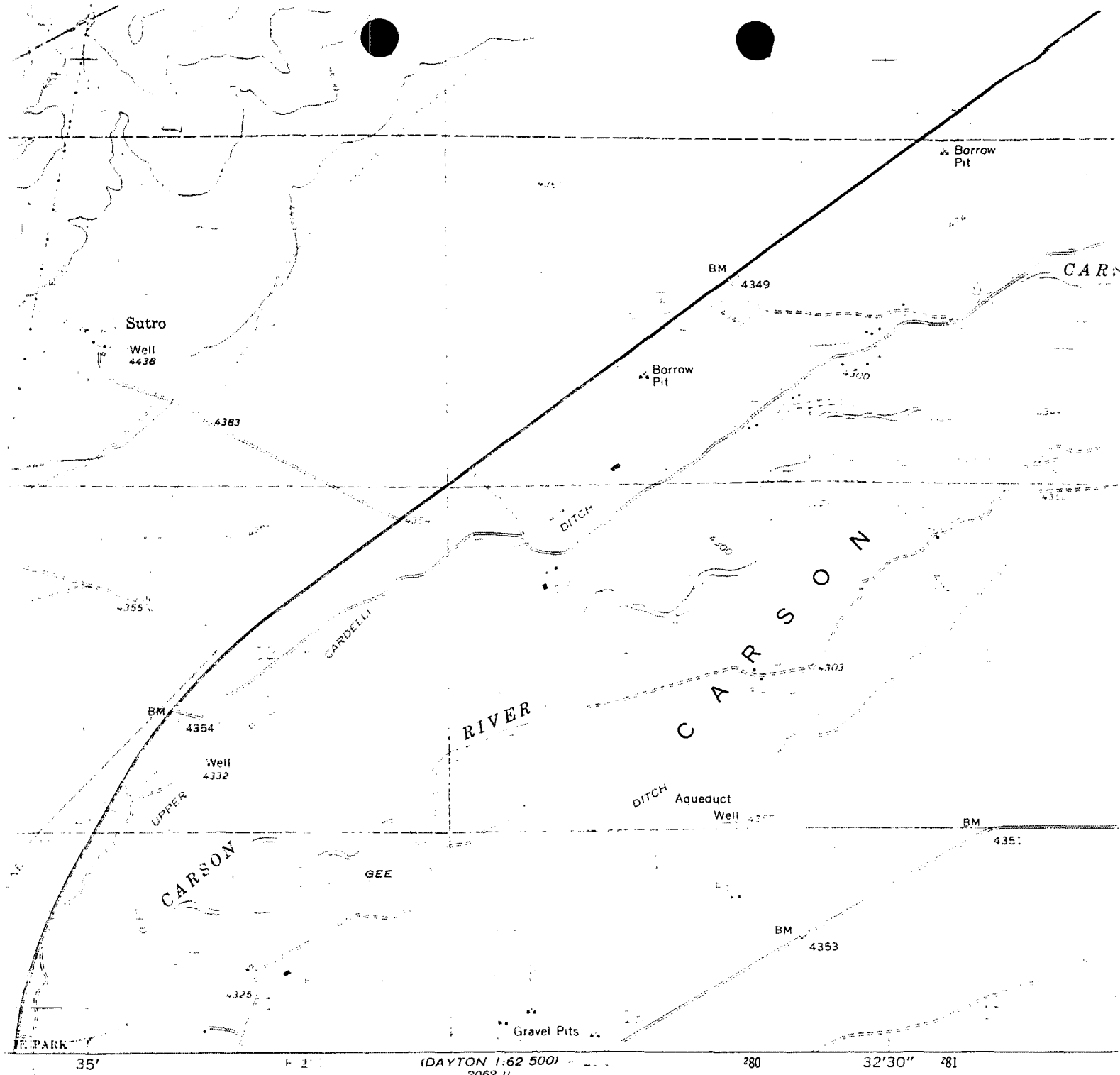
Recommendation	Initial	Date
No further Remedial Action Planned	<u>cjd</u>	<u>8/6/91</u>
Low Priority Screening Site Inspection	<u>          </u>	<u>          </u>
Medium Priority Screening Site Inspection	<u>          </u>	<u>          </u>

## REFERENCES

1. Lyon County Business License Department, Yerington, Nevada, 702-463-3341.
2. Lyon County Property Assessor, Yerington, Nevada, 702-463-3341.
3. Bureau of Business and Economic Research, University of Nevada, Reno, Business Bldg. Rm. 415, 1990 Census Information.
4. Anonymous phone call to John West, NDEP, July 30, 1990.
5. Memo from Alene Coulson, NDEP, to Litton Engineering Laboratories, September 12, 1990.
6. Letter to Alene Coulson, NDEP, from Litton Engineering Laboratories, October 26, 1990.
7. Letter from Alene Coulson, NDEP, to Michael Hughes, November 29, 1990.
8. Memo from Doug Martin, NDEP, to Jolaine Johnson, NDEP, December 27, 1990.

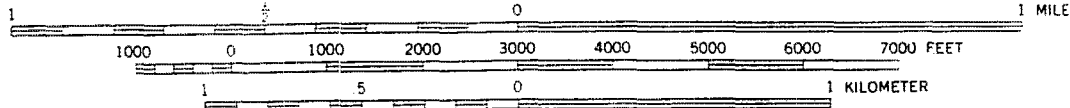
## APPENDICES

1. Report of Analysis, by Magnetek Ohio Transformer, June 26, 1990.
2. Map of site sent in by anonymous caller.
3. 12 pictures of the former Litton Engineering Site taken by Alene Coulson, NDEP, 8/15/90.
4. Nevada State Health Laboratory, analysis results of sample taken by Alene Coulson, NDEP, 12/5/90.
5. Daily flow records for the Cardelli Ditch, Office of the Water Master.
6. U.S. Geological Survey Water-Data Report NV-89-1.
7. Well Drillers Logs, State of Nevada Division of Water Resources.



(DAYTON 1:62 500)  
2062 II

SCALE 1:24 000



CONTOUR INTERVAL 40 FEET  
DOTTED LINES REPRESENT 20-FOOT CONTOURS  
NATIONAL GEODETIC VERTICAL DATUM OF 1929

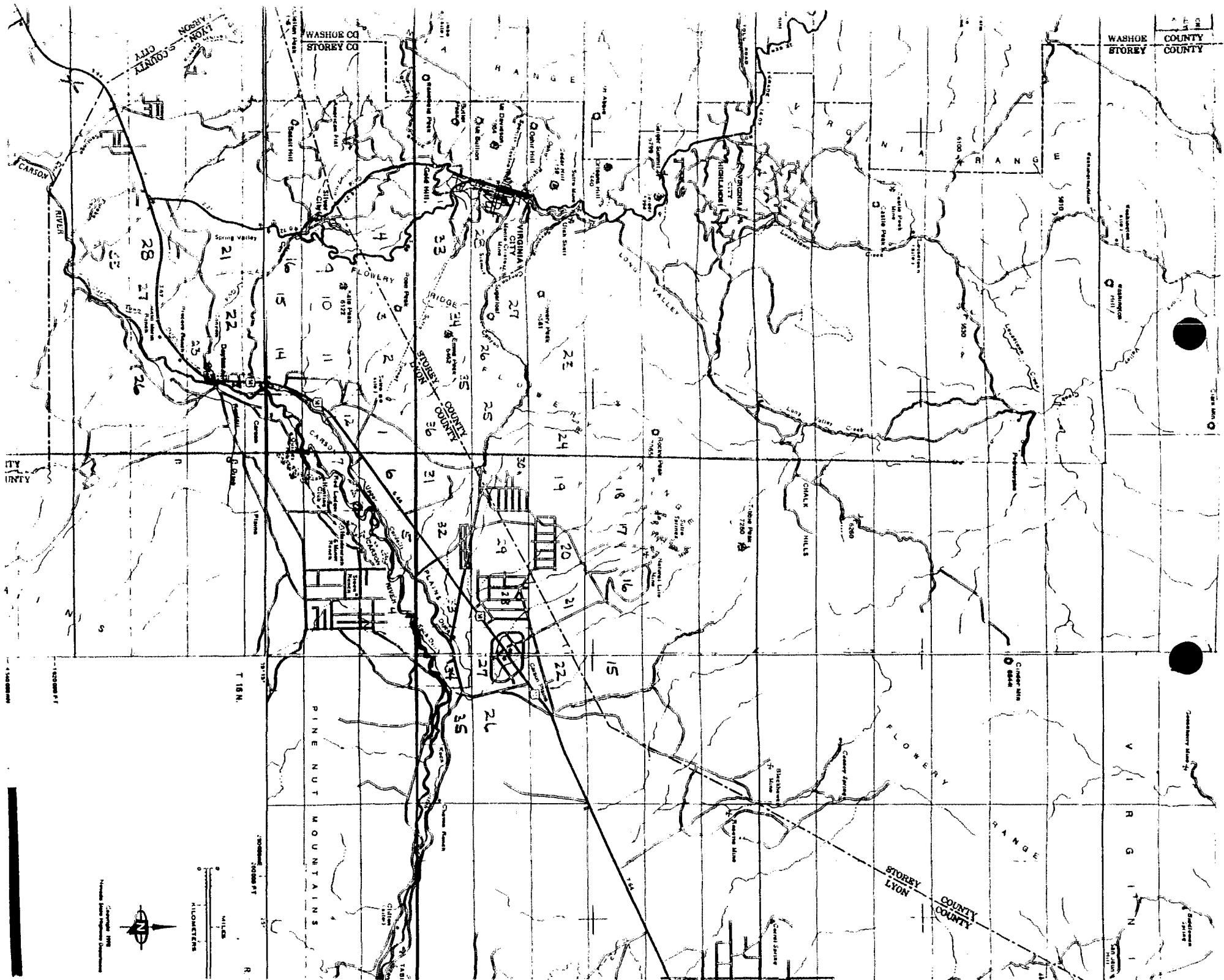
NEVADA

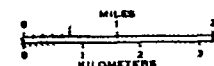
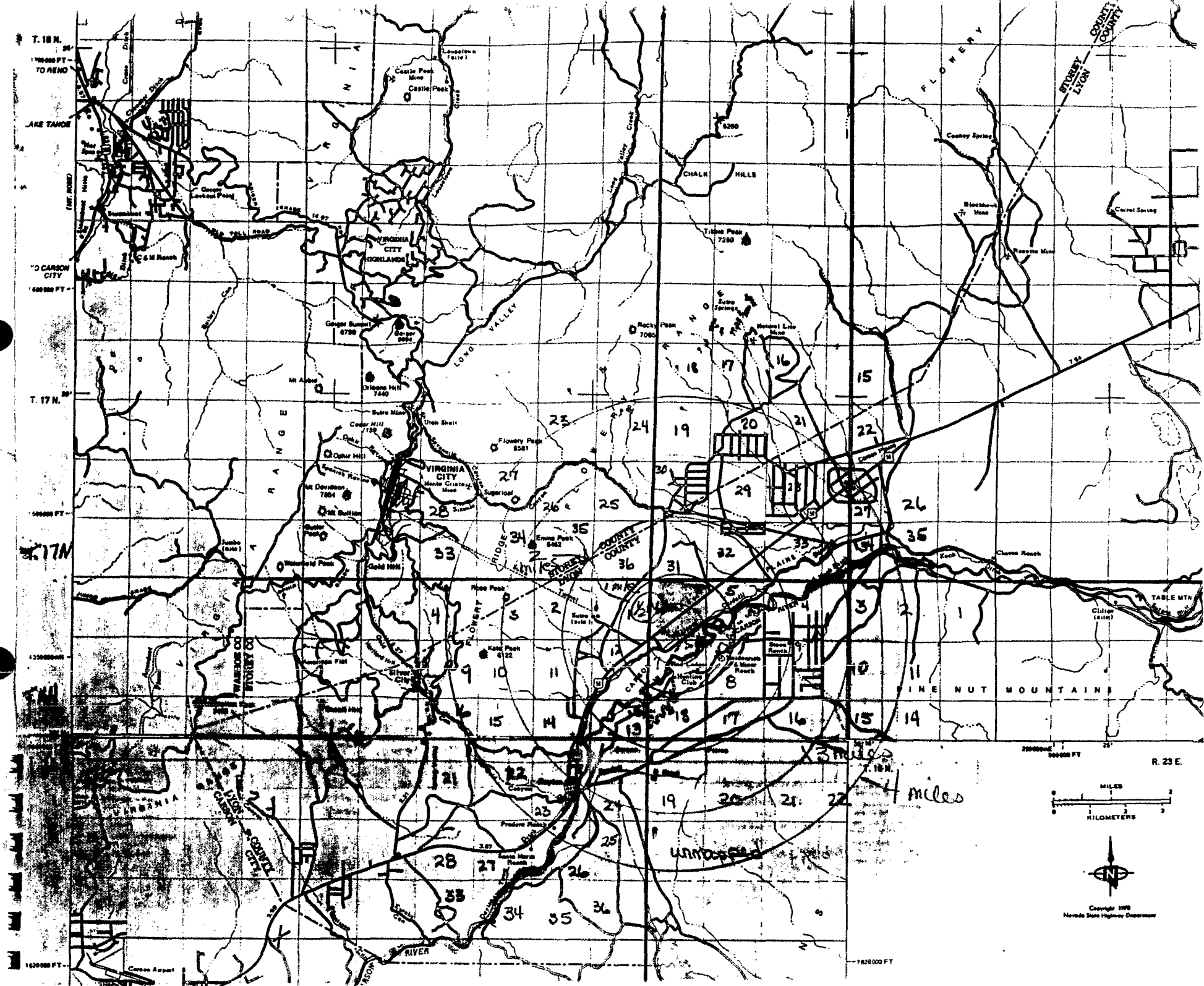
NORTH  
SHEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

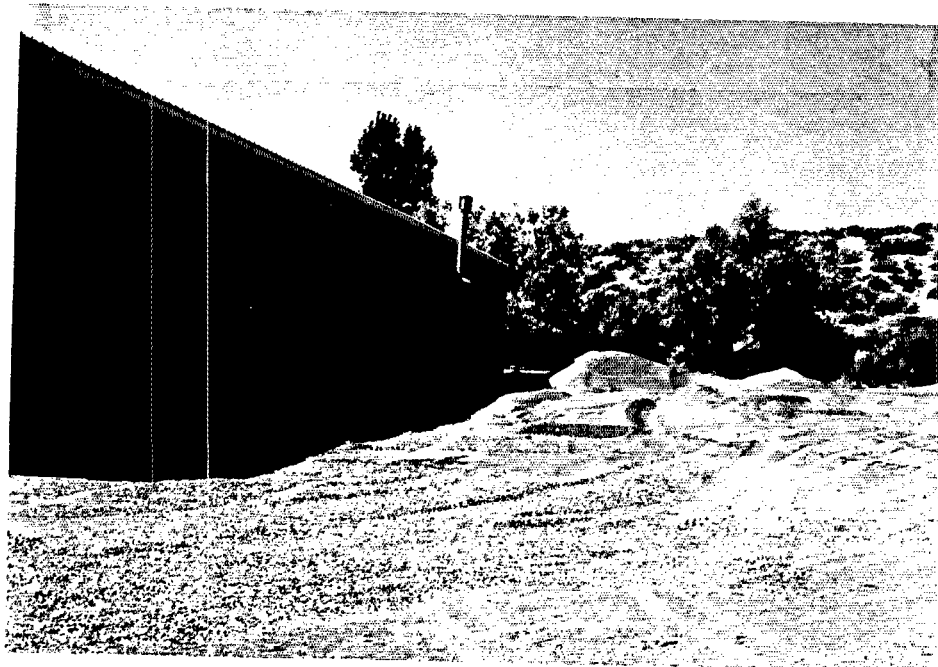
QUADRANGLE LL

Revision shown in purple  
taken 1980 and other sources  
field checked. Map edited

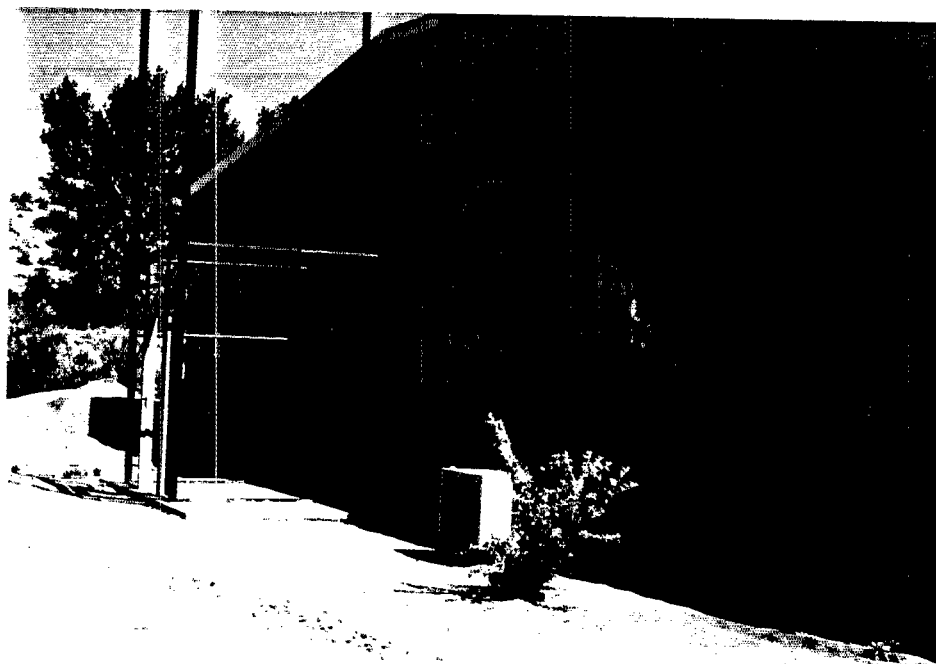




Copyright 1978  
Nevada State Highway Department

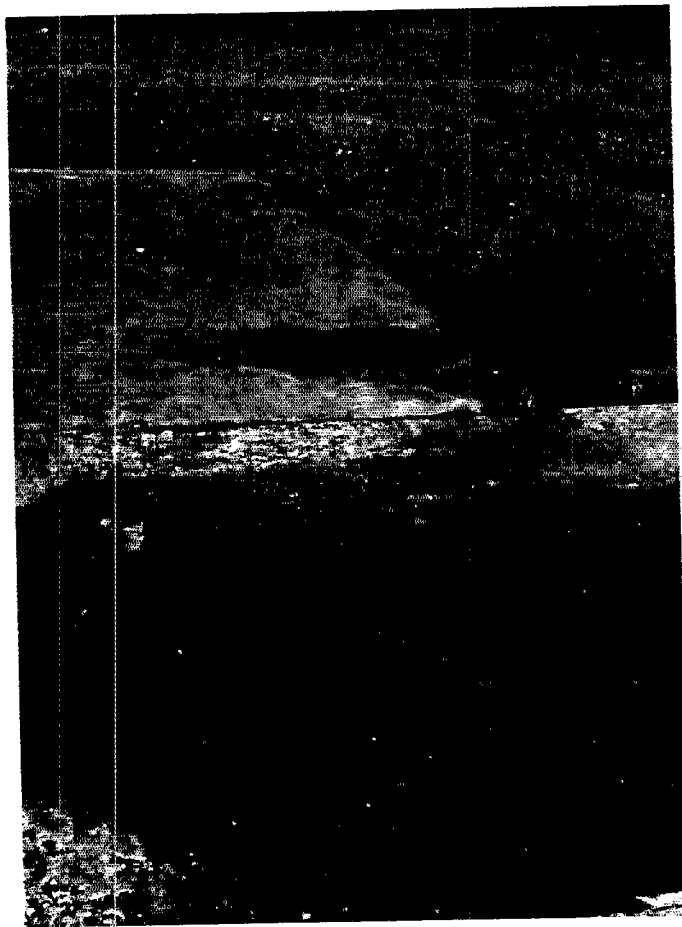


- 1) Litton Engineering - Former Site-Building North Side-Rear of Bldg. - New Pea Gravel On Ground - 8/15/90 10:00 Coulson/West

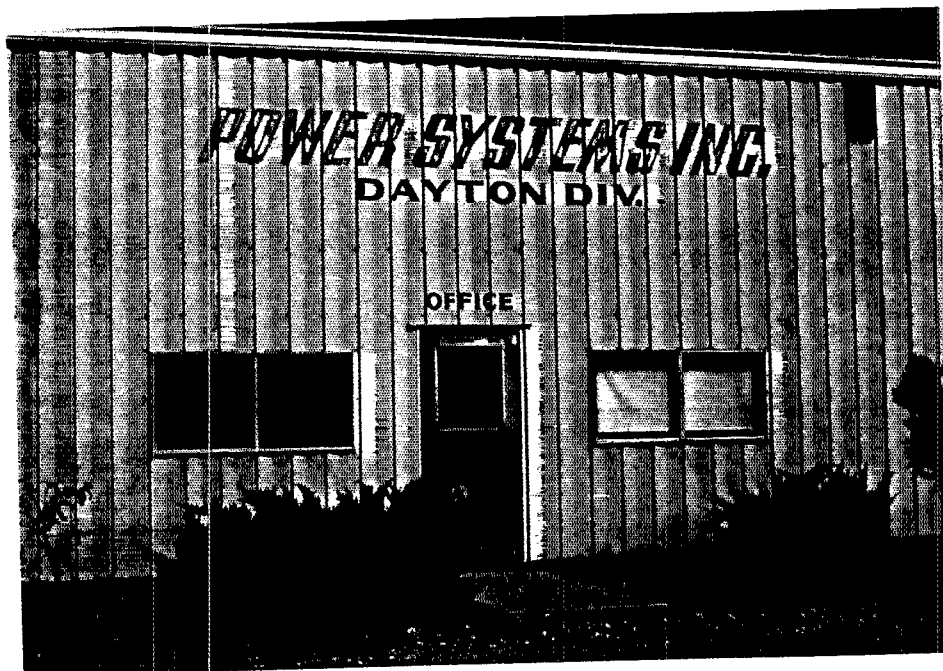


- 2) Litton Engineering - Former Site - Bldg West Side - New Pea Gravel on Ground 8/15/90 10:00 Coulson/West

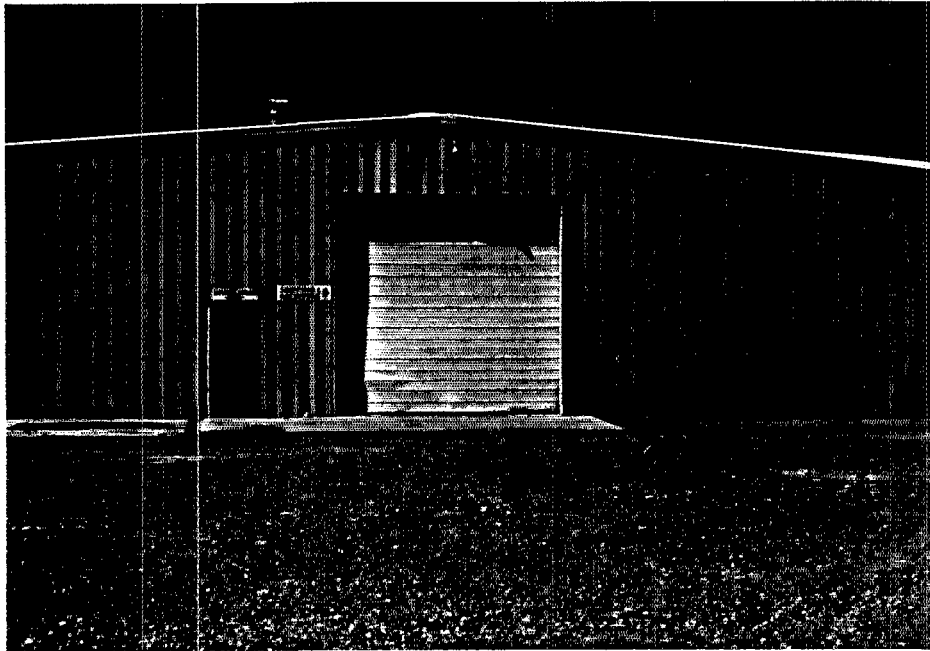




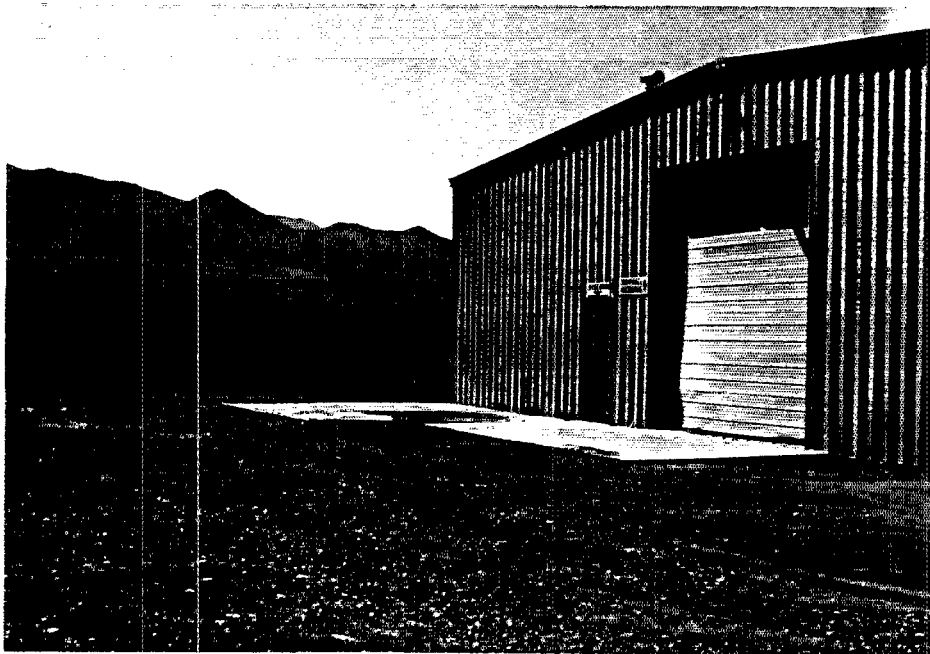
3) Litton Engineering - Former Site - Bldg East Side - Unknown  
Contamination on Ground 8/15/90 10:00 Coulson/West



4) Litton Engineering - Former Site - Bldg South Side - New Pea  
Gravel on Ground - 8/15/90 10:00 Coulson/West



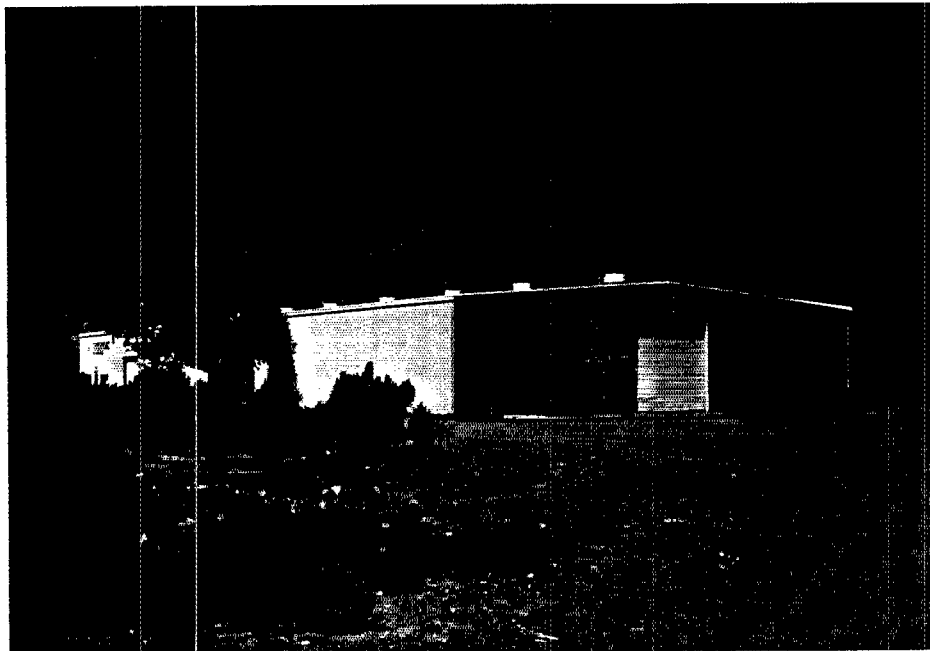
8) Litton Engineering - Former Site - Bldg East Side - New Pea Gravel  
on Ground - Contamination Noted 8/15/90 10:00 Coulson/West



7) Litton Engineering - Former Site - Bldg East Side - New Pea Gravel  
on Ground 8/15/90 10:00 Coulson/West



5) Litton Engineering - Former Site - Bldg South Side - Entrance -  
New Pea Gravel on Ground 8/15/90 10:00 Coulson/West



6) Litton Engineering - Former Site - Bldg South Side - Entrance -  
New Pea Gravel on Ground - 8/15/90 10:00 Coulson/West



9) Litton Engineering - Former Site - Bldg East Side - Unknown  
Contamination on Ground 8/15/90 10:00 Coulson/West



10) Litton Engineering - Former Site - Bldg East Side - Unknown  
Contamination on Ground 8/15/90 10:00 Coulson/West



11) Litton Engineering - Former Site - Bldg South Side Dry Creek  
Behind Bldg 8/15/90 10:00 Coulson/West



12) Litton Engineering - Former Site - Bldg South Side - Unknown  
Container With Puncture Holes 8/15/90 10:00 Coulson/West

30-40  
① TRANSFORMERS  
10-15 YEARS  
ON GROUND

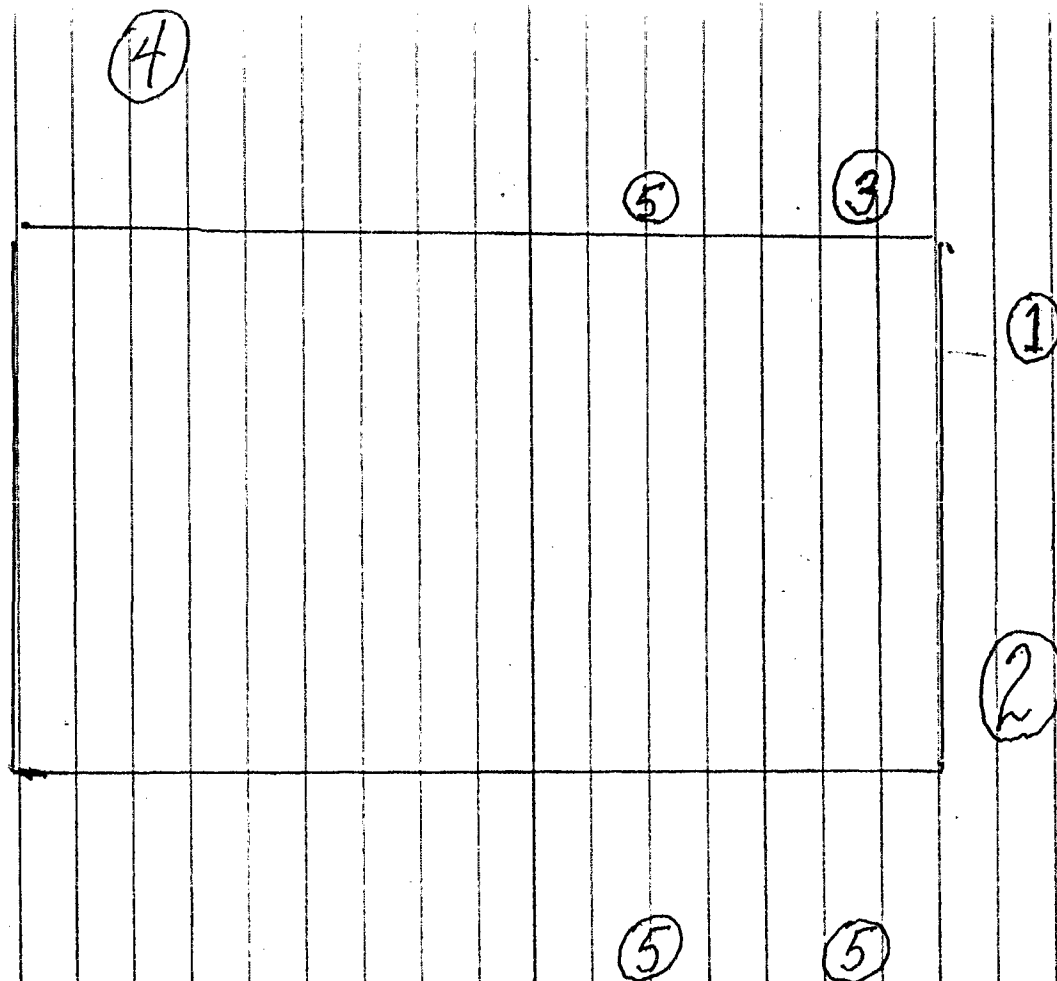
② TRANSFORMERS  
& DIESEL OIL

③ ANODIZING OR  
PLATING TANKS  
DUMPED

④ MISC. OILS FROM  
MACHINERY

⑤ OLD MILITARY  
OIL TANKS

⑥ OIL FOR HEATING,  
IN FLOOR, MAY  
BE TRANSFORMER  
OIL & CONTAIN PCB's



170 RIVER ROAD DAYTON, NV.

Map sent in from anonymous caller showing potential sites of contamination.

201 SOUTH FALL STREET 12<sup>th</sup> WEST  
CARSON CITY, NEVADA 89710 NYE lane  
(702) 687-5872

40 NORTH VIRGINIA STREET  
RENE NEVADA 89503  
(702) 789-0335

90285

COLLECTED BY ALENE COULSON

DATE 12/5/90 TIME 09:30

DEC 21 1990

RIVER BASIN 175 RIVER ROAD

STATION ID Dayton, NV

WATER TEMP N/A °C. 00010

DISSOLVED OXYGEN N/A PPM 00299

LABORATORY NO. 090285

RECEIVED BY \_\_\_\_\_

DATE \_\_\_\_\_ TIME \_\_\_\_\_

CONTROL POINT \_\_\_\_\_

FLOW \_\_\_\_\_

AIR TEMP \_\_\_\_\_ °C.

WEATHER \_\_\_\_\_

TYPE OF ANALYSIS:

Check analysis desired - ROUTINE POLLUTION \_\_\_\_\_ COD \_\_\_\_\_ BOD \_\_\_\_\_ ~~THREE~~ METALS chrom/copper  
For partial analysis CIRCLE PARAMETERS DESIRED, or enter in spaces provided.

FOR LABORATORY USE ONLY

THE RESULTS BELOW ARE ONLY REPRESENTATIVE OF THE SAMPLE SUBMITTED TO THIS LABORATORY

TDS @ 103°C. 00515	PPM	KJELDAHL-N 00625	PPM	CADMIUM* 01027	PPM
TSS @ 103°C. 00530	PPM	NITRATE-NO <sub>3</sub> 71851	PPM	CHROMIUM* 01034	PPM
E.C. 00095	SU	NITRITE-N 00613	PPM	COPPER* 01042	PPM
TURBIDITY 82079	NTU	AMMONIA-N 00608	PPM	IRON* 01045	PPM
COLOR 00080	SU	ORTHO-P 00671	PPM	LEAD* 01051	PPM
pH 00400	SU	TOTAL-P 00665	PPM	MERCURY 71900	PPM
ALKALINITY 39035 as CaCO <sub>3</sub>	PPM	CHLORIDE 00941	PPM	SELENIUM 01147	PPM
HCO <sub>3</sub> as HCO <sub>3</sub> 00440	PPM	COD 00335	PPM	ZINC* 01092	PPM
CO <sub>3</sub> as CO <sub>3</sub> 00445	PPM	BOD 00310	PPM	ARSENIC* 01002	PPM
TOTAL-N 00600	PPM	NO <sub>3</sub> -N 00618	PPM	BORON* 01022	PPM
HCO <sub>3</sub> as CaCO <sub>3</sub> 00425	PPM				
CO <sub>3</sub> as CaCO <sub>3</sub> 00430	PPM				

RECEIVED

DEC 26 1990

ENVIRONMENTAL PROTECTION

\*Total Recoverable Metals Dig.

REMARKS: Soil Sample from former Litton  
Eng. / Suspected metals contamination from  
disposal of electronic plating related  
waste discharge

12/17/90

*[Signature]*

PPM = MILLIGRAMS PER LITER  
SU = STANDARD UNITS  
(VPO40389.FOR)

*Sample discarded*  
*per Alene Coulson*  
*12/20/90*

LOCATION.--Lat 39°17'30", long 119°18'40", in SW1/4SE1/4 sec.32, T.17 N., R.24 E., Lyon County, Hydrologic Unit 16050202, on right bank 400 ft downstream from Buckland ditch, 2 mi west of Fort Churchill, and 4.5 mi upstream from Weeks Bridge on U.S. Highway 95 alternate.

DRAINAGE AREA.--1,302 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1911 to current year. Monthly discharge only for some periods, published in WSP 1314.

REVISED RECORDS.--WSP 1514: 1917; WDR NV-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,219.70 ft, above National Geodetic Vertical Datum of 1929. Prior to Apr. 25, 1924, nonrecording gage at site 7.8 mi upstream at different datum. Apr. 25, 1924, to Dec. 31, 1933, water-stage recorder at site 8 mi upstream at different datum. Jan. 1, 1934, to Sept. 30, 1957, water-stage recorder at present site at datum 1.36 ft higher (levels by Truckee-Carson Irrigation District). July 8, 1986, water-stage recorder at site 50 ft upstream at datum 5.0 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Many diversions for irrigation above station, including diversions for 720 acres between present site and sites used prior to Jan. 1, 1934. Buckland ditch diverts 400 ft upstream for irrigation downstream from station.

AVERAGE DISCHARGE.--78 years, 374 ft<sup>3</sup>/s, 271,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,600 ft<sup>3</sup>/s, Feb. 19, 1986, gage height, 8.35 ft; maximum during some periods in nearly every year since 1923.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 9	2000	*1,360	*6.03				

Minimum daily, no flow many days in September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.24	90	105	e92	253	536	283	280	97	.08	.03
2	.06	.40	78	e100	e87	231	687	258	254	69	.08	.02
3	.09	.25	74	105	e83	233	568	261	248	56	.06	.03
4	.04	.37	65	110	e78	e220	518	319	406	44	.04	.01
5	.04	.30	69	112	e84	227	455	428	916	37	.05	.01
6	.04	.28	74	e110	e90	210	440	637	953	21	.06	.01
7	.04	.25	76	e105	e97	276	549	859	910	11	.06	.02
8	.04	.31	83	e96	e102	473	725	1080	901	18	.41	.00
9	.04	.29	84	97	e112	1030	808	1260	983	9.2	.12	.00
10	.04	.28	82	109	e120	1160	871	1280	910	7.5	.14	.00
11	.04	.31	82	126	e120	884	872	1260	875	4.0	.08	.00
12	.08	.32	77	e123	e130	806	967	1060	863	4.4	.02	.00
13	.09	.35	78	e120	e130	694	873	909	785	4.1	.01	.00
14	.12	.41	76	122	e130	596	773	806	667	3.6	.02	.00
15	.15	.77	75	e111	e135	499	804	773	603	2.5	.06	.00
16	.10	1.5	78	e107	e150	460	893	767	538	1.9	.06	.00
17	.10	1.8	73	e102	e168	470	944	687	523	1.6	.05	.10
18	.10	3.7	73	e98	e185	424	883	711	501	1.2	.06	.00
19	.14	4.5	79	107	198	436	900	826	446	1.0	.06	.00
20	.14	8.7	88	105	258	490	945	723	404	.68	.07	.00
21	.23	15	89	116	246	509	1000	669	363	.34	.07	.00
22	.22	19	88	112	205	441	1110	640	290	.29	.05	.00
23	.16	26	e86	114	194	440	872	618	241	.33	.03	.00
24	.12	45	86	e109	274	462	716	586	211	.26	.04	.00
25	.13	181	83	e100	312	487	621	500	184	.25	.06	.00
26	.17	157	70	e100	285	533	536	394	148	.25	.04	.00
27	.14	124	42	e100	289	461	458	353	145	.17	.05	.00
28	.13	103	e64	119	281	403	392	340	167	.15	.07	.00
29	.21	87	36	117	---	439	335	366	130	.11	.05	.00
30	.23	88	e72	e103	---	720	303	370	111	.14	.05	.00
31	.25	---	96	e97	---	583	---	361	---	.09	.04	---
TOTAL	3.53	870.33	2368	3357	4635	15550	21354	20384	14956	397.06	2.14	0.23
MEAN	.11	29.0	76.3	108	166	502	712	658	499	12.8	.069	.008
MAX	.25	181	96	126	312	1160	1110	1280	983	97	.41	.10
MIN	.04	.24	36	96	78	210	303	258	111	.09	.01	.00
AC-FT	7.0	1730	4690	6660	9190	30840	42360	40430	29670	788	4.2	.5

CAL YR 1988 TOTAL 19591.56 MEAN 53.5 MAX 234 MIN .00 AC-FT 38860  
WTR YR 1989 TOTAL 83875.29 MEAN 230 MAX 1280 MIN .00 AC-FT 166400

e Estimated



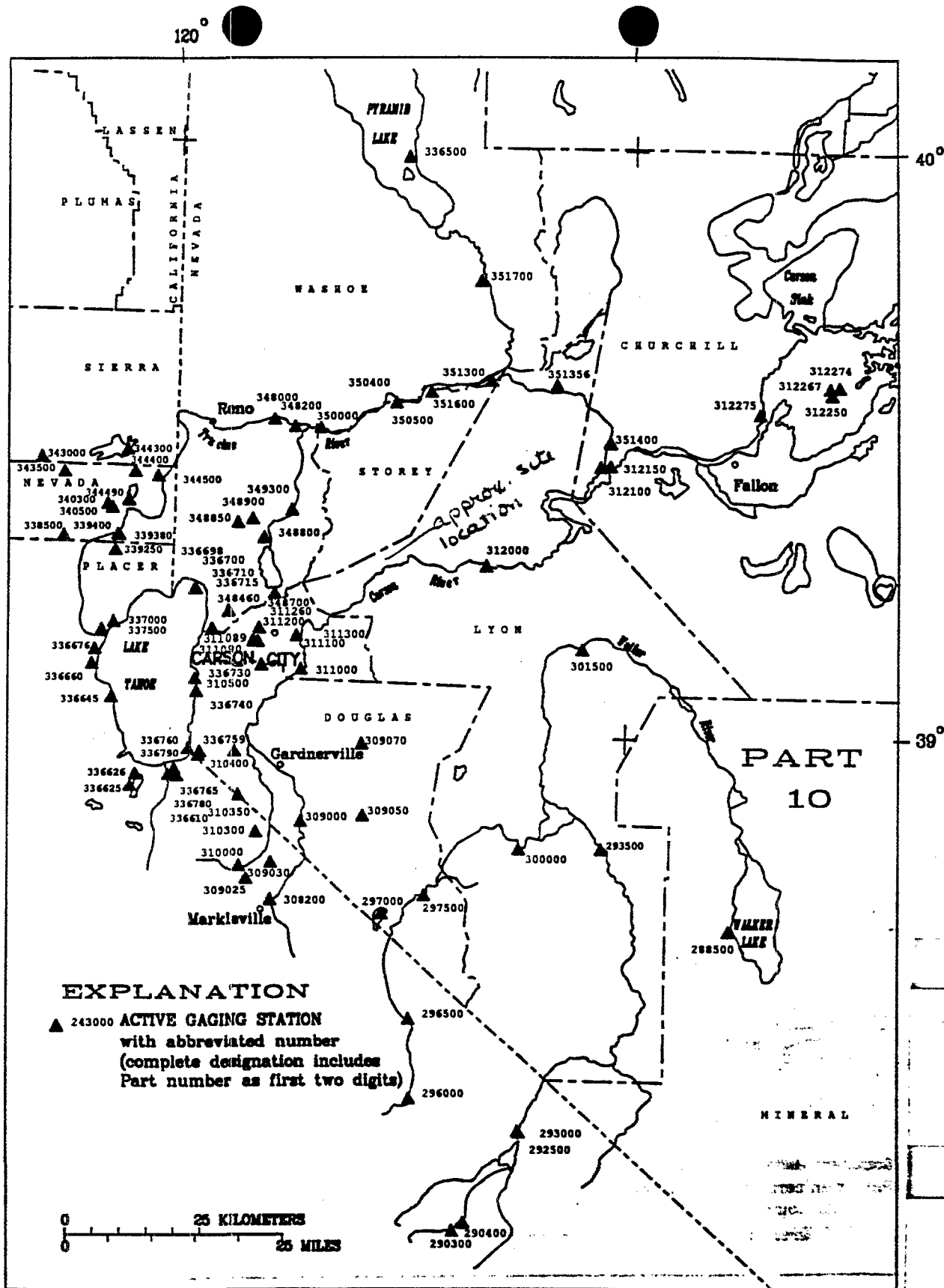


FIGURE 10.- Gaging stations in west-central Nevada.

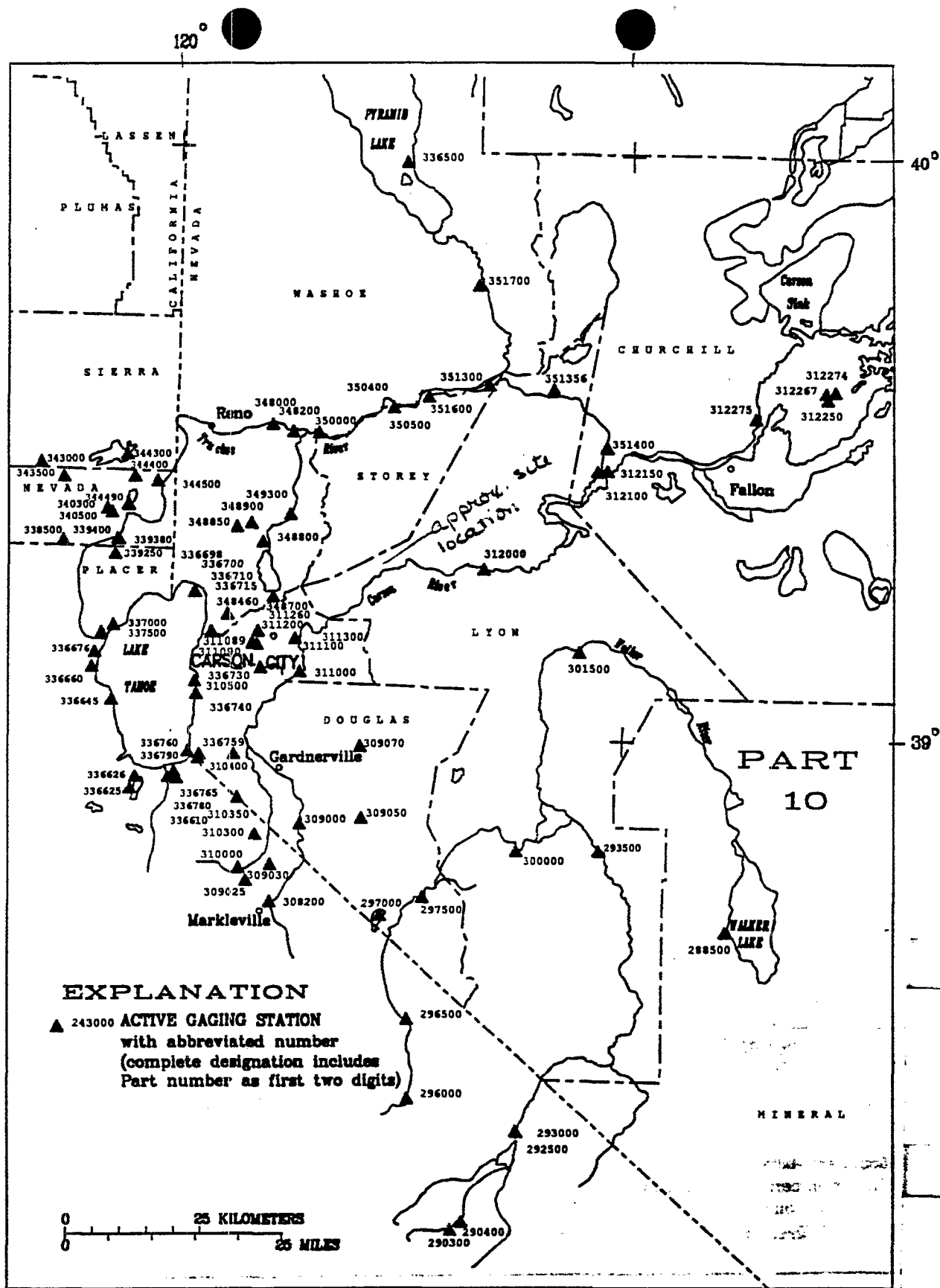


FIGURE 10.- Gaging stations in west-central Nevada.



R. 22 E. (Joins sheet 10)



AREA, NEVADA NO. 5

Orthophotobase compiled from 1974 aerial photography  
 the U.S. Department of The Interior, Geological Survey  
 Planimetric detail obtained from 7½ minute  
 10,000-foot grid based on state coordinate system

OFFICE OF THE WATER MASTER  
CARSON RIVER SYSTEM  
DAILY FLOW RECORD

REPORTING - CARDELLI  
HEAD  
1990

Date	APRIL cfs	MAY cfs	JUNE cfs	JULY cfs	AUG cfs	SEPT cfs	OCT cfs
1							
2	18.0			7.1	3.1		
3				6.3		2.6	
4		25.0	24.0				
5	19.0			4.4		2.6	
6							
7		28.0	24.0	4.2	2.4		
8					3.5	2.6	
9	22.0			4.2			
10		21.0		4.8	3.8	1.3	
11		24.0	26.0				
12							
13	15.0			3.0	3.3	0.6	
14		21.0	30.0				
15							
16	25.0			4.8	2.6		
17		21.0		20.0		0	
18			28.0				
19	22.0			23.0			
20				16.0	0.3	0.8	
21		26.0	24.0				
22							
23	18.0			10.0	0.2		
24				8.4		0	
25		30.0	13.0				
26	19.0			9.6			
27				6.6	0.3	1.2	
28		34.0	14.0				
29			11.0				
30	28.0			3.5	0.2		
31		24.0			2.6		
Max	28.0	34.0	30.0	23.0	3.8	2.6	
Min	15.0	21.0	11.0	3.0	0.2	0.0	
Avg	20.7	25.4	21.6	8.3	2.0	1.2	13.35
A-F	1228	1559	1280	522	124	70	

TOTAL ACRE-FEET:

4783

Notes: Flow rates are based on current meter measurements,  
or rated stage height observations.

OFFICE OF THE WATER MASTER  
CARSON RIVER SYSTEM  
DAILY FLOW RECORD

ROCK POINT - CARDELLI  
HE  
1984

Date	APRIL cfs	MAY cfs	JUNE cfs	JULY cfs	AUG cfs	SEPT cfs	OCT cfs
1		29.0					
2			33.0				
3	24.0			31.0	2.8		
4		36.0			3.1		
5		41.0	22.0				
6	28.0			23.0			
7				15.0			
8		70.0	32.0				
9					7.6		
10	37.0			12.0			
11		39.0			3.5		
12			34.0			SW	
13	36.0			7.3			
14				7.3	2.9		
15		27.0					
16			31.0		2.8		
17				6.0			
18	36.0	27.0					
19			30.0				
20				5.7			
21				5.1			
22		30.0	33.0				
23					1.4		
24	30.0			6.0			
25		28.0					
26			26.0				
27				3.8		6.6	
28	28.0			3.8			
29			45.0				
30		35.0				SW	
31				2.0			
Max	37.0	70.0	45.0	31.0	7.6	6.6	
Min	24.0	27.0	22.0	2.0	0.0	0.0	19.32
Avg	31.7	36.7	31.8	9.9	3.0	3.3	
A-F	1884	2222	1898	609	185	196	

TOTAL ACRE-FEET:

6983

Notes: Flow rates are based on current meter measurements,  
or rated gage height observations.

OFFICE OF THE WATER MASTER  
CARSON RIVER SYSTEM  
DAILY FLOW RECORD

ROCK POINT -- CARDELLI  
HEAD  
1988

Date	APRIL cfs	MAY cfs	JUNE cfs	JULY cfs	AUG cfs	SEPT cfs	OCT cfs
1	21.4			8.3	0.3		
2		37.7					
3			38.3				
4	17.6						
5		31.6		5.8	0.0		
6	22.8	28.4	35.1				
7				3.9			
8	22.1			3.4	0.0		
9		37.7					
10			29.3				
11	24.7			2.9			
12		34.1			0.0		
13		37.2	17.8				
14				2.3			
15	8.7			1.8			
16		42.9	17.3				
17			16.6				
18	18.4			1.2			
19		44.1					
20	30.9	45.1	8.1				
21				1.1			
22			14.1	1.1			
23		46.6	11.5				
24			12.4				
25	36.1			0.7			
26		43.5					
27			11.3				
28	28.4			0.8			
29	37.2			0.3			
30			9.7				
31							
Max	37.2	46.6	38.3	8.3	0.3		
Min	8.7	28.4	8.1	0.3	0.0		
Avg	24.4	29.0	18.5	2.6	0.1		14.0
A-F	1445	2593	1096	159	5		

TOTAL ACRE-FEET:

5102

Notes: Flow rates are based on current meter measurements,  
or rated gage height observations.

OFFICE OF THE WATER MASTER  
CARSON RIVER SYSTEM  
DAILY FLOW RECORD

ROCKEFORT - CARDELLI  
HEAD  
1987

Date	APRIL cfs	MAY cfs	JUNE cfs	JULY cfs	AUG cfs	SEPT cfs	OCT cfs
1		42.0	16.5				
2	5.9			5.0			
3				5.5	2.0	0.5	
4		39.0	24.0				
5		36.7	24.0				
6	22.1			3.0	4.1		
7		18.0			2.0		
8		38.0	17.0			0.5	
9	22.0			0.7			
10				1.0	2.0	0.5	
11		46.6	10.8				
12							
13	26.0			1.0	0.8		
14	23.5				0.8	0.5	
15		34.0	17.0				
16	27.5						
17				1.1	0.8	0.5	
18		23.0	12.0	1.0			
19			21.1				
20	23.5		9.0	1.5	0.5		
21		30.0	10.0			0.5	
22		39.0	9.0				
23	40.2		15.0	1.0			
24			13.5	3.5	0.5	0.0	
25			11.8				
26							
27	24.0		9.0	4.0	0.5		
28	24.0	26.7				0.0	
29			7.1				
30	40.0						
31				7.8	0.5		
Max	40.2	46.6	17.0	6.0	4.1	0.5	
Min	5.9	23.0	7.1	0.7	0.5	0.0	13.97
Avg	25.3	35.7	17.9	3.2	1.3	0.4	
A-F	1505	2193	1065	198	80	22	

TOTAL ACRE-FEET:

5063

Notes: Flow rates are based on current meter measurements,  
or rated stage height observations.

OFFICE OF THE WATER MASTER  
CARSON RIVER SYSTEM  
DAILY FLOW RECORD

ROCK POINT - CARDELLI  
HEAD  
1986

Date	APRIL cfs	MAY cfs	JUNE cfs	JULY cfs	AUG cfs	SEPT cfs	OCT cfs
1	24.0			24.0	19.0		
2		28.7	39.0	28.0		18.0	
3			75.0	26.0			
4					30.0	19.7	
5		27.0	37.6			17.0	
6		25.1	30.0				
7				23.2	18.6		
8		18.0		22.0	14.0	16.0	
9		18.3	27.0				
10			20.0	36.0		14.5	
11				28.0	22.1	17.0	
12		22.0	26.0				
13		24.0					
14				43.0	22.0		
15		30.9			18.0	20.0	
16			28.0				
17			23.7	36.0			
18	12.8			30.0	22.0	23.0	
19		38.4	22.0			27.0	
20		34.0	22.0				
21	12.9			30.0	22.0		
22	16.0	34.0		36.0	21.5	42.0	
23		28.0	17.0				
24	18.6		12.0	0.0			
25					15.0	50.0	
26			25.0			14.0	
27		39.0	36.2				
28	23.1			13.0	15.0		
29	29.0	44.1			15.0	18.0	
30		45.0	26.0				
31				22.0			
Max	29.0	44.1	39.0	43.0	30.0	50.0	
Min	12.8	18.0	12.0	0.0	14.0	14.0	24.08
Avg	18.7	30.4	26.5	26.5	19.6	22.8	
A-F	519	1668	1576	1628	1201	1353	

TOTAL ACRE-FEET:

8144

Notes: Flow rates are based on current meter measurements,  
\* \* \* \* \* gage height observations \* \* \*





WELLS IN FOUR MILE RADIUS OF LITTON ENGINEERING

TNSHP RNGE SEC DOM T/C MUN IRR STK IND MON TEST UNK COMMENTS

16N	21E	01	01	00	00	00	00	00	01	00	00	1987, 80 FT., STATIC WTR LVL 53 FT.
16N	21E	02	01	00	00	00	00	00	00	00	00	1963, 155 FT., STATIC WTR LVL ?
16N	21E	03	00	00	00	00	00	00	00	00	00	
16N	21E	04	00	00	00	00	00	00	00	00	00	
16N	21E	09	00	00	00	00	00	00	00	00	00	
16N	21E	10	00	00	00	00	00	00	00	00	00	
16N	21E	11	00	00	00	00	00	00	00	00	00	
16N	21E	12	02	00	00	00	00	04	00	00	00	1985, 110 FT., STATIC WTR LVL 58 FT.
16N	21E	13	04	00	00	01	00	00	00	00	01	1985, 120 FT., STATIC WTR LVL 40 FT.
16N	21E	14	03	00	01	00	00	00	00	01	01	1985, 280 FT., STATIC WTR LVL 110 FT.
16N	21E	15	06	00	00	00	00	00	00	00	00	1986, 128 FT., STATIC WTR LVL 20 FT.
16N	21E	16	00	00	00	00	00	00	00	00	00	
16N	21E	22	01	00	00	00	00	00	00	00	00	1954, 72 FT., STATIC WTR LVL ?
16N	21E	23	22	00	01	00	00	01	00	00	00	1981, 430 FT., STATIC WTR LVL 170 FT.

WELLS IN FOUR MILE RADIUS OF LITTON ENGINEERING

TNSHP RNGE SEC DOM T/C MUN IRR STK IND MON TEST UNK COMMENTS

16N	21E	24	05	00	02	02	00	06	00	00	00	1989, 494 FT., STATIC WTR LVL 58 FT.
16N	21E	25	01	00	00	00	00	00	00	00	00	1948, 75 FT., STATIC WTR LVL 11 FT.
16N	21E	26	18	01	00	00	00	00	00	00	01	1987, 86 FT., STATIC WTR LVL 5 FT.
16N	22E	02	00	00	00	00	00	00	00	00	00	
16N	22E	03	00	00	00	00	00	00	00	00	00	
16N	22E	04	18	00	00	00	00	02	00	00	00	1986, 200 FT., STATIC WTR LVL 120 FT.
16N	22E	05	00	00	00	17	01	00	00	00	00	1982, 75 FT., STATIC WTR LVL 25 FT.
16N	22E	06	03	00	01	00	00	00	00	00	00	1989, 243 FT., STATIC WTR LVL 10 FT.
16N	22E	07	02	00	00	03	00	00	00	00	00	1984, 105 FT., STATIC WTR LVL 60 FT.
16N	22E	08	01	00	00	00	00	00	00	00	00	1981, 107 FT., STATIC WTR LVL 30 FT.
16N	22E	09	27	00	00	05	00	00	00	00	00	1989, 200 FT., STATIC WTR LVL 58 FT.
16N	22E	10	01	00	00	00	00	00	00	00	00	1978, 180 FT., STATIC WTR LVL 98 FT.

WELLS IN FOUR MILE RADIUS OF LITTON ENGINEERING

[illegible][illegible]

WELLS IN FOUR MILE RADIUS OF LITTON ENGINEERING

TNSHP RNGE SEC DOM T/C MUN IRR STK IND MON TEST UNK COMMENTS

17N	21E	36	00	00	00	00	00	00	00	00	00	
17N	22E	19	01	00	00	00	00	00	00	00	00	1981, 192 FT., STATIC WTR LVL 165 FT.
17N	22E	20	71	00	00	00	00	00	00	00	00	1986, 380 FT., STATIC WTR LVL 200 FT.
17N	22E	21	02	00	00	00	00	00	00	00	00	1971, 215 FT., STATIC WTR LVL 180 FT.
17N	22E	27	95	00	00	00	00	02	00	00	03	1990, 160 FT., STATIC WTR LVL 140 FT.
17N	22E	28	52	00	01	00	00	01	00	00	03	1986, 130 FT., STATIC WTR LVL 80 FT.
17N	22E	29	02	00	00	00	00	00	00	00	00	1979, 115 FT., STATIC WTR LVL 65 FT.
17N	22E	30	25	00	00	00	00	00	00	00	01	1990, 200 FT., STATIC WTR LVL 160 FT.
17N	22E	31	02	00	00	01	00	02	00	00	01	1990, 175 FT., STATIC WTR LVL 37 FT.
17N	22E	32	07	00	04	01	00	00	00	00	01	1983, 180 FT., STATIC WTR LVL 50 FT.

Page No. 5  
07/02/91

WELLS IN FOUR MILE RADIUS OF LITTON ENGINEERING

[illegible][illegible]

June, 26 1990

JOB NO.: 100367

Litton Engineering  
P.O. Box 950  
Grass Valley, CA 95945  
ATTN: Larry Litton

REPORT OF ANALYSIS

Analysis: PCB in Oil Analytical Method: EPA 600/4-81-045

Date Received: 6/21/90 M.D.L. = Minimum Detectable Level

Lab Order	Sample ID	Serial No.	Date	Concentration	M.D.L.
27051	LTF-01		6/21/90	10.1 mg/Kg	5 mg/Kg
27052	LTF-02		6/22/90	3.0 mg/Kg	2 mg/Kg
27053	LTF-03		6/22/90	2.7 mg/Kg	2 mg/Kg
27054	LTF-04		6/22/90	6.2 mg/Kg	5 mg/Kg
27055	LTF-05		6/22/90	26.4 mg/Kg	5 mg/Kg
27056	LTF-06		6/22/90	<2 mg/Kg	2 mg/Kg
27057	LTF-07		6/22/90	3.5 mg/Kg	2 mg/Kg
27058	LTF-08		6/22/90	<2 mg/Kg	2 mg/Kg
27059	LTF-09		6/22/90	2.5 mg/Kg	2 mg/Kg
27060	LTF-10		6/22/90	17.5 mg/Kg	5 mg/Kg
27061	LTF-11		6/22/90	6.6 mg/Kg	5 mg/Kg
27062	LTF-12		6/23/90	3.9 mg/Kg	2 mg/Kg
27063	LTF-13		6/22/90	5.5 mg/Kg	5 mg/Kg
27064	LTF-14		6/22/90	14.3 mg/Kg	5 mg/Kg
27065	LTF-15		6/25/90	6.1 mg/Kg	2 mg/Kg

*Ron Jack*  
Ron Jack  
Analyst

*George Miller*  
George Miller  
Lab Manager

Accredited by the American Association for Laboratory Accreditation in the Environmental field of testing, as listed in the current A2LA Directory of Accredited Laboratories. The above analyses were performed under the accreditation requirements of A2LA.

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MAGNETEK OHIO TRANSFORMER  
1776 CONSTITUTION AVENUE  
LOUISVILLE, OH 44641  
216/875-3333

THE OIL IN Transformer  
S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/21/90  
AND CONTAINED 10.1 mg/Kg±10% PCB  
REFERENCE: OT LAB ORDER 27051  
JOB# 100367 CUST. Litton Engineering  
PCB Classification: NON-PCB  
LTF-01

MAGNETEK OHIO TRANSFORMER  
1776 CONSTITUTION AVENUE  
LOUISVILLE, OH 44641  
216/875-3333

THE OIL IN Transformer  
S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/22/90  
AND CONTAINED 3.0 mg/Kg±10% PCB  
REFERENCE: OT LAB ORDER 27052  
JOB# 100367 CUST. Litton Engineering  
PCB Classification: NON-PCB  
LTF-02

MAGNETEK OHIO TRANSFORMER  
1776 CONSTITUTION AVENUE  
LOUISVILLE, OH 44641  
216/875-3333

THE OIL IN Transformer  
S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/22/90  
AND CONTAINED 2.7 mg/Kg±10% PCB  
REFERENCE: OT LAB ORDER 27053  
JOB# 100367 CUST. Litton Engineering  
PCB Classification: NON-PCB  
LTF-03



MAGNETEK OHIO TRANSFORMER  
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THE OIL IN Transformer

S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/22/90  
AND CONTAINED 6.2 mg/Kg±10% PCB  
REFERENCE: OT LAB ORDER 27054  
JOB# 100367 CUST. Litton Engineerin  
PCB Classification: NON-PCB  
LTF-04

MAGNETEK OHIO TRANSFORMER  
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LOUISVILLE, OH 44641  
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THE OIL IN Transformer

S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/22/90  
AND CONTAINED 26.4 mg/Kg±10% PCB  
REFERENCE: OT LAB ORDER 27055  
JOB# 100367 CUST. Litton Engineerin  
PCB Classification: NON-PCB  
LTF-05

MAGNETEK OHIO TRANSFORMER  
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216/875-3333

THE OIL IN Transformer

S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/22/90  
AND CONTAINED 2 mg/Kg±10% PCB  
REFERENCE: OT LAB ORDER 27056  
JOB# 100367 CUST. Litton Engineerin  
PCB Classification: NON-PCB  
LTF-06

MAGNETEK OHIO TRANSFORMER  
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LOUISVILLE, OH 44641  
216/875-3333

THE OIL IN Transformer

S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/22/90  
AND CONTAINED 3.5 mg/Kg±10% PCB  
REFERENCE: OT LAB ORDER 27057  
JOB# 100367 CUST. Litton Engineerin  
PCB Classification: NON-PCB  
LTF-07

MAGNETEK OHIO TRANSFORMER  
1776 CONSTITUTION AVENUE  
LOUISVILLE, OH 44641  
216/875-3333

THE OIL IN Transformer

S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/22/90  
AND CONTAINED <2 mg/Kg±10% PCB  
REFERENCE: OT LAB ORDER 27058  
JOB# 100367 CUST. Litton Engineerin  
PCB Classification: NON-PCB  
LTF-08

MAGNETEK OHIO TRANSFORMER  
1776 CONSTITUTION AVENUE  
LOUISVILLE, OH 44641  
216/875-3333

THE OIL IN Transformer

S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/22/90  
AND CONTAINED 2.5 mg/Kg±10% PCB  
REFERENCE: OT LAB ORDER 27059  
JOB# 100367 CUST. Litton Engineerin  
PCB Classification: NON-PCB  
LTF-09

MAGNETEK OHIO TRANSFORMER  
1776 CONSTITUTION AVENUE  
LOUISVILLE, OH 44641  
216/875-3333

THE OIL IN Transformer

S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/22/90  
AND CONTAINED 17.5 mg/Kg $\pm$ 10% PCB  
REFERENCE: OT LAB ORDER 27060  
JOB# 100367 CUST. Litton Engineerin  
PCB Classification: NON-PCB  
LTF-10

MAGNETEK OHIO TRANSFORMER  
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216/875-3333

THE OIL IN Transformer

S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/22/90  
AND CONTAINED 6.6 mg/Kg $\pm$ 10% PCB  
REFERENCE: OT LAB ORDER 27061  
JOB# 100367 CUST. Litton Engineerin  
PCB Classification: NON-PCB  
LTF-11

MAGNETEK OHIO TRANSFORMER  
1776 CONSTITUTION AVENUE  
LOUISVILLE, OH 44641  
216/875-3333

THE OIL IN Transformer

S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/23/90  
AND CONTAINED 3.9 mg/Kg $\pm$ 10% PCB  
REFERENCE: OT LAB ORDER 27062  
JOB# 100367 CUST. Litton Engineerin  
PCB Classification: NON-PCB  
LTF-12



MAGNETEK OHIO TRANSFORMER  
1776 CONSTITUTION AVENUE  
LOUISVILLE, OH 44641  
216/875-3333

THE OIL IN Transformer  
S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/22/90  
AND CONTAINED 5.5 mg/Kg±10% PCB  
REFERENCE: OT LAB ORDER 27063  
JOB# 100367 CUST. Litton Engineerin  
PCB Classification: NON-PCB  
LTF-13

MAGNETEK OHIO TRANSFORMER  
1776 CONSTITUTION AVENUE  
LOUISVILLE, OH 44641  
216/875-3333

THE OIL IN Transformer  
S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/22/90  
AND CONTAINED 14.3 mg/Kg±10% PCB  
REFERENCE: OT LAB ORDER 27064  
JOB# 100367 CUST. Litton Engineerin  
PCB Classification: NON-PCB  
LTF-14

MAGNETEK OHIO TRANSFORMER  
1776 CONSTITUTION AVENUE  
LOUISVILLE, OH 44641  
216/875-3333

THE OIL IN Transformer  
S/N n/a WAS SAMPLED  
FOR PCB CONTENT. THE SAMPLE, AS  
RECEIVED, WAS TESTED ON 06/25/90  
AND CONTAINED 6.7 mg/Kg±10% PCB  
REFERENCE: OT LAB ORDER 27065  
JOB# 100367 CUST. Litton Engineerin  
PCB Classification: NON-PCB  
LTF-15